

REMARKS

Claims 1-17 are pending. Claims 5, 10, 13, and 17 have been amended. No new matter has been introduced. Reexamination and reconsideration of the present application are respectfully requested.

In the June 21, 2002 Office Action, the Examiner rejected claims 1-4, 6-11, and 13-17. The Examiner rejected claims 1-4, 6-11, and 13-17 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,072,759 to Maeda et al. (the Maeda reference). The Examiner allowed claim 12 and objected to claim 5 as being dependent upon a rejected based claim, but indicated that claim 5 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The rejection is respectfully traversed.

The present invention relates to incorporating information indicative of disk-applicable recording speeds in the lead-out start time information within ATIP information that is recorded in pre-grooves located in a lead-in area of an optical disk. Once an optical disk is inserted into an optical disk recording device, the lead-out start time information is read out, and recording of the optical disk may be performed according to a recording speed indicated by the lead-out start time information as an acceptable recording speed.

Independent claim 1 recites:

A recordable optical disk where disk-applicable-recording-speed information indicative of applicable recording speeds for the optical disk is pre-recorded on a track of said optical disk during manufacture of the optical disk.

The Maeda reference is directed to a recording medium where physical format

management information including data relative to a physical format is recorded in a lead-in area, and data of a specific first data format and first data management information for managing reproduction of such data is recorded in a data area in conformity with the physical format management information. In this recording medium, identification data signifying the existence of recorded data of a second data format different from the first data format is included in the physical format management information. Data of the second data format is recorded in the data area in conformity with the physical format management information, and further second data management information is recorded at a predetermined position to manage reproduction of the data of the second data format.

The Maeda reference does not disclose, teach, or suggest the recordable optical disk of independent claim 1. Unlike independent claim 1, the Maeda reference makes no mention of a recordable optical disk where *disk-applicable-recording-speed information indicative of applicable recording speeds for the optical disk is pre-recorded on a track of said optical disk* during manufacture of the optical disk. The Maeda reference only teaches a data structure of a DVD disk for *reproduction/playback* of the DVD disk (col. 8, line 35 to col. 9, line 67; and Figs. 8 and 9), and there is no mention at all in the Maeda reference of *disk-applicable-recording-speed information indicative of applicable recording speeds for the optical disk that is pre-recorded on a track of said optical disk*, as recited in independent claim 1.

The passage, "Four bits b0-b3 of byte 1 are used for recording a minimum lead-out rate. These bits b0-b3 become '0000' for 2.52 Mbps, '0001' for 5.04 Mbps, or '0010' for 10.08 Mbps", quoted by the Examiner (Office Action, page 2; see col. 9, lines

36-39), discloses a bit transfer rate of output data during data reproduction/playback, and does not relate at all to a *disk recording speed*, and more specifically, to *disk-applicable-recording-speed information indicative of applicable recording speeds for the optical disk that is pre-recorded on a track of said optical disk*, as recited in independent claim 1. Applicant respectfully submits that the term "minimum lead-out rate" in the Maeda reference (col. 9, line 37) was written in error, and instead should have read (i.e., been translated into English as) "minimum *read-out* rate"; this belief is consistent with the following sentence: "These bits b0-b3 become '0000' for 2.52 Mbps, '0001' for 5.04 Mbps, or '0010' for 10.08 Mbps" (col. 9, lines 37-39), which relates to bit transfer rates for output data during data *reproduction/playback* and *not* for *recording speeds*. It is often the case that the letter "l" is confused with the letter "r" ("lead" instead of "read") in translating from Japanese to English (the Maeda reference was based on a Japanese priority patent application), as there are no linguistic equivalents for the letter "l" in East Asian languages, and in particular, Japanese. Accordingly, applicant respectfully submits that independent claim 1 distinguishes over the Maeda reference.

Independent claim 8 recites:

a disk-applicable-recording-speed information reproducing circuit that reproduces, from among disk readout signals generated by reading an optical disk to be recorded on, *disk-applicable-recording-speed information pre-recorded on a track of the optical disk during manufacture of the optical disk*; and

a control circuit that performs recording on the optical disk after *setting a recording speed for the optical disk to a predetermined speed value within a range specified by the disk-applicable-recording-speed information reproduced*

by said disk-applicable-recording-speed information reproducing circuit.

The Maeda reference does not disclose, teach, or suggest the optical disk recording device of independent claim 8. Unlike independent claim 8, the Maeda reference makes no mention at all of a disk-applicable-recording-speed information reproducing circuit that reproduces, from among disk readout signals generated by reading an optical disk to be recorded on, *disk-applicable-recording-speed information pre-recorded on a track of the optical disk during manufacture of the optical disk*, and a control circuit that performs recording on the optical disk after *setting a recording speed for the optical disk to a predetermined speed value within a range specified by the disk-applicable-recording-speed information reproduced by said disk-applicable-recording-speed information reproducing circuit*. As previously discussed, the Maeda reference only shows a data structure of a DVD disk for *reproduction/playback* of the DVD disk (col. 8, line 35 to col. 9, line 67; and Figs. 8 and 9). Accordingly, applicant respectfully submits that independent claim 8 distinguishes over the Maeda reference for the reasons set forth above and with respect to independent claim 1 above.

Independent claim 10, as amended, recites:

a time information reproducing circuit that reproduces, from among disk readout signals generated by reading the optical disk to be recorded on, *either one or both of the lead-in start time information and the lead-out start time information recorded in the pre-groove wobbles or pre-pits of the optical disk during manufacture of the optical disk*; and

a control circuit that *determines disk-applicable recording speeds based on either one or both of the lead-in start time information and the lead-out start*

time information reproduced by said time information reproducing circuit and performs recording on the optical disk after setting a recording speed for the optical disk to a speed value within a range of the determined disk-applicable recording speeds.

The Maeda reference does not disclose, teach, or suggest the optical disk recording device of independent claim 10, as amended. Unlike independent claim 10, as amended, the Maeda reference does not disclose at all of a time information reproducing circuit that reproduces, from among disk readout signals generated by reading the optical disk to be recorded on, *either one or both of the lead-in start time information and the lead-out start time information recorded in the pre-groove wobbles or pre-pits of the optical disk during manufacture of the optical disk*, and a control circuit that *determines disk-applicable recording speeds based on either one or both of the lead-in start time information and the lead-out start time information reproduced by said time information reproducing circuit and performs recording on the optical disk after setting a recording speed for the optical disk to a speed value within a range of the determined disk-applicable recording speeds.* As mentioned above, the Maeda reference only shows a data structure of a DVD disk for *reproduction/playback* of the DVD disk (col. 8, line 35 to col. 9, line 67; and Figs. 8 and 9). Accordingly, applicant respectfully submits that independent claim 10, as amended, distinguishes over the Maeda reference for the reasons set forth above and with respect to independent claim 1 above.

Independent claims 15 and 17, as amended, both recite limitations similar to independent claim 8. Accordingly, applicant respectfully submits that independent

claims 15 and 17, as amended, distinguish over the Maeda reference for the reasons set forth above with respect to independent claim 8. Moreover, independent claims 15 and 17, as amended, further distinguish over the Maeda reference because the Maeda reference does not teach a *recording speed designating section that designates a particular recording speed value based on an operation by a user, and a control circuit that performs recording on the optical disk after setting a recording speed for the optical disk to the particular recording speed value designated by said recording speed designating section*, as recited in independent claims 15 and 17, as amended.

Independent claim 13 recites limitations similar to independent claim 10, as amended. Claims 2-4, 6, and 7 all depend, directly or indirectly, from independent claim 1. Claims 9 and 14 directly depend from independent claim 8. Claim 11 directly depends from independent claim 10, as amended. Claim 16 directly depends from independent claim 15. Accordingly, applicant respectfully submits that claims 2-4, 6, 7, 9, 11, 13, 14, and 16 distinguish over the Maeda reference for the reasons set forth above.

Independent claim 5, as amended, has been rewritten in independent form including all of the limitations of the base claim and the intervening claim. Applicant respectfully submits that independent claim 5, as amended, is now allowable.

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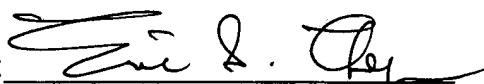
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Applicant believes that the foregoing amendments place the application in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call either of the undersigned attorneys at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.

Respectfully submitted,

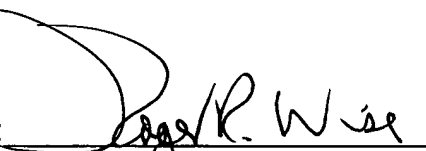
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APPENDIX

IN THE TITLE OF THE INVENTION:

Please amend the Title of the Invention at page 1, line 2 as follows:

RECORDABLE OPTICAL DISK AND OPTICAL DISK RECORDING DEVICE
UTILIZING PRE-RECORDED RECORDING SPEED INFORMATION

IN THE CLAIMS:

Please amend claims 5, 10, 13, and 17 as follows:

5. (Amended) A recordable optical disk [as recited in claim 2] where disk-applicable-recording-speed information indicative of applicable recording speeds for the optical disk is pre-recorded on a track of said optical disk during manufacture of the optical disk,

wherein the disk-applicable-recording-speed information is pre-recorded in pre-groove wobbles or pre-pits of the optical disk, [wherein] the disk-applicable-recording-speed information is information indicative of lower and upper limit values of the applicable recording speeds, and [wherein] one of the lower and upper limit values of the applicable recording speeds is incorporated in lead-in start time information recorded in the pre-groove wobbles or pre-pits of the optical disk and another of the lower and upper limit values of the applicable recording speeds is incorporated in lead-out start time information recorded in the pre-groove wobbles or pre-pits of the optical disk.

10. (Amended) An optical disk recording device for recording on an optical

disk where disk-applicable-recording-speed information is incorporated in either one or both of lead-in start time information and lead-out start time information recorded in pre-groove wobbles or pre-pits of the optical disk during manufacture of the optical disk, said optical disk recording device comprising:

a time information reproducing circuit that reproduces, from among disk readout signals generated by reading the optical disk to be recorded on, either one or both of the lead-in start time information and the lead-out start time information recorded in the pre-groove wobbles or pre-pits of the optical disk during manufacture of the optical disk; and

a control circuit that determines disk-applicable recording speeds [on the basis of] based on either one or both of the lead-in start time information and the lead-out start time information reproduced by said time information reproducing circuit and performs recording on the optical disk after setting a recording speed for the optical disk to a speed value within a range of the determined disk-applicable recording speeds.

13. (Amended) An optical disk recording device for recording on a recordable optical disk where both of lower and upper limit values of disk-applicable recording speeds are incorporated in either one or both of lead-in start time information and lead-out start time information recorded in pre-groove wobbles or pre-pits of the optical disk during manufacture of the optical disk, said optical disk recording device comprising:

a time information reproducing circuit that reproduces, from among disk

readout signals generated by reading the optical disk to be recorded on, the lead-in start time information or the lead-out start time information recorded in the pre-groove wobbles or pre-pits of the optical disk during manufacture of the optical disk; and

a control circuit that determines the lower and upper limit values of the disk-applicable recording speeds [on the basis of] based on the lead-in start time information or the lead-out start time information reproduced by said time information reproducing circuit and performs recording on the optical disk after setting a recording speed for the optical disk to a speed value within a range of the lower limit value to the upper limit value of the disk-applicable recording speeds.

17. (Amended) An optical disk recording device for recording on a recordable optical disk where disk-applicable-recording-speed information is incorporated in either one or both of lead-in start time information and lead-out start time information recorded in pre-groove wobbles or pre-pits of the optical disk during manufacture of the optical disk, said optical disk recording device comprising:

[an] a disk-applicable-recording-speed information storage circuit that stores therein correspondencies between values of either one or both of the lead-in start time information and the lead-out start time information recorded in the pre-groove wobbles or pre-pits of the optical disk during manufacture of the optical disk and values of disk-applicable recording speeds;

a time information reproducing circuit that reproduces, from among disk

readout signals generated by reading the optical disk to be recorded on, either one or both of the lead-in start time information and the lead-out start time information recorded in the pre-groove wobbles or pre-pits of the optical disk;

a display unit that displays the disk-applicable-recording-speed information that is read out from said disk-applicable-recording-speed information storage circuit [on the basis of] based on either one or both of the lead-in start time information and the lead-out start time information reproduced by said time information reproducing circuit;

a recording speed designating section that designates a particular recording speed value [on the basis of] based on an operation by a user; and

a control circuit that performs recording on the optical disk after setting a recording speed for the optical disk to the particular recording speed value designated by said recording speed designating section.